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CTS 2 Service Description and Purpose

The goal of the Common Terminology Services 2 (CTS 2) Specification is to expand the original functionality outlined in HL7?s Common Terminology Service (CTS) Specification. CTS 2 defines the functional requirements of a set of service interfaces to allow the representation, access, and maintenance of terminology content either locally, or across a federation of terminology service nodes.

The CTS 2 specification strives to expand on the original functionality outlined in HL7?s Common Terminology Service specification, specifically looking to:

1. Establish the minimal common structural model for terminology behavior independent from any specific terminology implementation or interchange model, and how it is related to meta-data (information about data) and data (the information itself)
2. Integrate into CTS 2 the functional coverage outlined in the existing CTS specification.
3. Specify both an information and functional model that addresses the relationships and use of terminology, e.g. how value sets are built and queried, and how terminological information is validated.
4. Specify the interactions between terminology providers and consumers ? how terminology users can submit unambiguous requests for corrections and extensions and how revisions to content are identified, distributed and integrated into running systems.
5. Specify how mapping between compatible terminologies and data models is defined, exchanged and revised.
6. Specify how logic-based terminologies can be queried about subsumption and inferred relationships.
7. Engage broad community participation to describe the dimensions of use and purpose for vocabularies and value sets. This aim will attempt to harmonize these efforts in terms of models, use cases, and requirements for creating a functional model for CTS 2.

The CTS 2 DSTU can be found here.

Scope

To address the above stated purpose of CTS2, the scope of functionality addresses several broad categories.

Terminology services represent functions necessary to manage, search, and access terminology content. Terminology services provide a consistent specification for accessing and managing terminology content, independent of the terminology content and underlying technology stack. Terminology content represents various resources including lists, value sets, taxonomies, and formal description logic based ontologies. The following thematic areas are considered in scope for CTS 2.

- Administration: This is a set of functionality that provides the ability to manage content as part of a terminology service. Administration functions include the ability to load terminologies, export terminologies, activate terminologies, and retire terminologies. These functions are generally protected and accessible by service administrators with appropriate authorization.

- Search / Query: This is a set of functionality that provides the ability to find concepts based on some search criteria. This includes restrictions to specific associations or other attributes of the terminology, including navigation of associations for result sets. This represents the primary utility for using terminology content in a number of application contexts.

- Authoring / Maintenance: This is a set of functionality that provides the ability to create and maintain content. From a terminology service perspective, this would include the appropriate APIs to add, change, or delete concepts and associations. This would also include the processing of change events from various terminology providers.

- Associations: This is a set of functionality that provides the ability to map concepts and the concept's associated attributes from a source terminology to a concept in a target terminology, or create relationships between concepts within a single code system.

CTS 2 is intended to allow the look up and management of a wide variety of terminology components, including, but not limited to, Concepts, Associations, and Value Sets. This includes the ability to resolve content bound to a specific Context of Use (Concept Domain) or Jurisdictional Domain (Realm). At the functional level, the service interface will explicitly allow the query, definition, publication, and modification of the different terminology components that are required of terminologies and terminology services.

Conformance profiles are defined in this specification which are intended to focus specific implementations of CTS 2 to address a specific class of functionality and pre-define minimum trait sets for each specified functional class. This will also allow for performance optimizations to be defined for terminology searches and queries (which are implementation considerations which will be considered in the technical specification arising from the OMG RFP process) The scope of this functional specification covers support for multiple terminology sources and a federated terminology environment.

Participation and Progress

Participation and Progress

Event or Activity	Date
Mayo Clinic posts initial submission to OMG CTS 2 RFP	2010/05/24
Gap Analysis of CTS2 / LexEVS completed	2010/02/15
REST Prototype Operational	2010/01/31
REST Model Completed	2010/01/10
Mayo Clinic submits Letter-of-Intent (LOI) to respond to the CTS 2 OMG RFP	2009/12/22
Mayo Clinic attends OMG Technical Meeting in Long Beach, CA	2009/12/7 - 2009/12/11
Mayo Clinic to participate in OMG Terminology Services Day	2009/12/8
Mayo Clinic obtains Contributing Membership in the OMG	2009/12
Mayo Clinic attends HL7 Working Group Meeting in Atlanta, GA.	2009/09/20 - 2009/09/25
Mayo Clinic attends OMG Technical meeting in San Antonio, TX	2009/09/14 - 2009/09/18
OMG votes to issue RFP	2009/09/16
Mayo Clinic participates in review and creation of OMG CTS 2 RFP	2009/08/01 - 2009/09/14

OMG Timeline

The following timeline is what was published in the OMG RFP for CTS 2:

OMG Timeline

Event or Activity	Actual Date
RFP placed on OMG document server	2009/08/07
Preparation of RFP by TF	2009/08/17
Approval of RFP by Architecture Board Review by TC	2009/10/17
TC votes to issue RFP	2009/10/16
LOI to submit to RFP due	2010/01/31
Voter registration closes	2010/05/21
Initial Submissions due and placed on OMG document server (?Four week rule?)	2010/05/24
Initial Submission presentations	2010/06/22
Preliminary evaluation by TF	2010/10/22
Revised Submissions due and placed on OMG document server (?Four week rule?)	2010/11/08
Revised Submission presentations	2010/12/06

Final evaluation and selection by TF Recommendation to AB and TC	2010/12/08
Approval by Architecture Board Review by TC	2010/12/09
TC votes to recommend specification	2010/12
BoD votes to adopt specification	2011/03

Links

- CTS 2 SFM

- OMG RFP for CTS 2

- OMG RFP Evaluation Criteria

- caBIG® Workspace Standards Efforts

- HSSP Project